



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,645	10/09/2001	Michael Vanhilst	10010310-1	1021

7590 07/16/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

BRANT, DMITRY

ART UNIT	PAPER NUMBER
----------	--------------

2655

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/974,645	VANHILST, MICHAEL	
	Examiner	Art Unit	
	Dmitry Brant	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/9/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

BEST AVAILABLE COPY

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/09/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Karaorman et al. (6,631,346).

The U.S. patent of Karaorman et al. teach a computer-based speech processing method and therefore Karaorman et al.'s invention necessarily includes the computer apparatus (system) and computer code necessary to implement such a system (for claims 1-9, and 20).

The table below summarizes the claimed limitations of Applicant's invention and parts of Karaorman et al.'s patent that "read on" these limitations.

Claim #	Limitations	Karaorman et al.
1,11, 20	An automatic speech recognition method, comprising: converting spoken input into a <u>sequence of meaning tokens</u> contained in a speech recognition	The system takes the input sentence (118, FIG. 4) from speech recognizer (117, FIG. 4)

	<p>dictionary and corresponding to a sequence of vocabulary words most likely to have been spoken by a user,</p> <p>wherein the speech recognition dictionary comprises a plurality of meaning tokens each <u>associated with one or more pronunciations of one or more vocabulary words and signifying a single meaning.</u></p>	<p>and creates tagged text output (180, FIG. 4), which is essentially a sequence of tags (tokens - see FIG. 3)</p> <p>Lexical analysis stage (120, FIG. 4) of speech recognition uses lexical filters (126, 128, FIG. 4) to generate tags for the input text, wherein each tag has a single context-specific meaning, such as time, city-name, etc. (see FIG. 3 and Col. 5, lines 51-57). Inherently, the tags are stored in some form of database or memory, as this is a computer system and tags are text-based, thus requiring storage in computer-readable medium.</p>
2,12	The method of claim 11, wherein each meaning token is characterized by a unique spelling.	As seen from the table (Col. 11, lines 50 - Col. 12, line 55) each of the possible tags has a unique spelling in combination with the final word identifier. For example, flightNumTag=FNUM[fnum] would become a unique tag given a valid flightnumber (Col. 12, line 28). Same argument applies to the rest of the tags: CityNameTag, airlineTag, etc.
3,13	The method of claim 12, wherein the spelling of a meaning token facilitates extraction of meaning by a language analyzer.	As seen from the table (Col. 11, lines 50 - Col. 12, line 55), tags carry semantic information that is processed by speech understanding module (28, FIG. 2) using the global parser (62, FIG. 4) to extract the overall meaning of the request. The tags (tokens) themselves directly relate to the meaning of the tagged information: for example, tag flighNumTag=FNUM[12345] clearly carries information about flight number 12345.
4,14	The method of claim 13, wherein <u>the spelling of a meaning token encodes one or more labels</u>	Tags identify categories, such as city-names, class of seats, meal information, etc. (Col. 5,

	<u>identifying one or more respective application-specific categories.</u>	lines 51-60) and (Col. 11, lines 50 - Col. 12, line 55)
5,15	The method of claim 14, wherein an application-specific category identified by a label encoded in the spelling of a meaning token is an <u>object category, a place category, an event category, or an action category.</u>	Tags identify categories, such as city-names (place), class of seats (object), flight info (event), etc. (Col. 5, lines 51-60) and (Col. 11, lines 50 - Col. 12, line 55)
6,16	The method of claim 11, wherein multiple meaning tokens are associated with <u>each of one or more polysemous vocabulary words</u> contained in the speech recognition dictionary.	Multiple tags are associated with phrases (multiple words) having ambiguous (or polysemous) meanings ("before 5 December ten") - (FIG. 5 and Col. 6, lines 51-58)
7,17	The method of claim 11, further comprising extracting meaning from the sequence of meaning tokens based upon <u>a set of task-specific semantic rules.</u>	Speech understanding module extracts meaning from the tagged text using semantic rules, such as identification of empty slots that need filling. (Col. 3, lines 5-6 and Col. 3, lines 25-38)
8,18	The method of claim 17, further comprising <u>selecting an action</u> from a set of application-specific actions based upon the extracted meaning.	Based on semantic analysis, dialog manager (30, FIG.2) instructs computer response module (34, FIG. 2) to perform some action (Col. 3, lines 34-38). Computer response module inherently maintains a list of possible actions corresponding to allowed computer responses to the user (Col.3, lines 39-48)
9,19	The method of claim 18, further comprising <u>issuing one or more commands</u> to carry out the selected action.	Based on semantic analysis, dialog manager (30, FIG.2) instructs computer response module (34, FIG. 2) to perform some action (Col. 3, lines 34-38)

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Martin (5,642,519) teaches speech interpreter capable of tokenizing input text.

Duan et al. (6,721,697) teach a tokenizing speech processing system aimed at reducing lexical ambiguities between processed words/tokens.

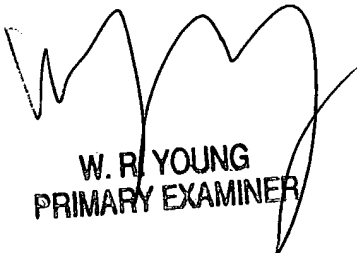
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Brant whose telephone number is (703) 305-8954. The examiner can normally be reached on Mon. - Fri. (8:30am - 5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Ivars Smits can be reached on (703) 306-3011. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Tech Center 2600 receptionist whose telephone number is (703) 305- 4700.

DB

7/12/04


W. R. YOUNG
PRIMARY EXAMINER